

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 04187448  
PUBLICATION DATE : 06-07-92

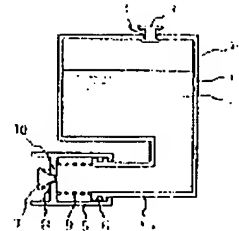
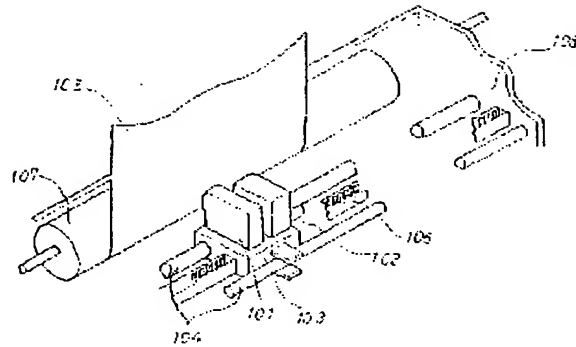
APPLICATION DATE : 21-11-90  
APPLICATION NUMBER : 02317541

APPLICANT : SEIKO EPSON CORP;

INVENTOR : SUGIMURA SHIGEO;

INT.CL. : B41J 2/175

TITLE : INK CARTRIDGE



ABSTRACT : PURPOSE: To make print recovery operation simple and an ink cartridge compact in size and low in cost by providing a sub-tank for inducting ink into a print head, a non-return valve for preventing reverse flow of the ink, and a main tank for containing the ink attached slidably to the sub-tank.

CONSTITUTION: An ink cartridge 102 is pushed to a frame 108 by the movement of a carriage 103. The pressure in the ink cartridge increases with decrease of the internal capacity of a sub-tank 5. The ink in the sub-tank 5 is sent to a print head 101 passing through an opened non-return valve 7 and a wall 10. At this time, the air pressure at the upper part of the ink in the main tank 1 also rises at the same time, so that an air opening valve 3 will not be opened because an upward force is loaded thereon. In this way, the ink is sent to the print head 101 and bubbles and dusts in the print head 101 are discharged to the outside together with the ink. Thus, the bubbles and the dusts in the print head are discharged together with the ink, so that ink drips can be ejected again.

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